

EVENT AND RELATIONSHIP TIMEPIECE

BACKGROUND OF THE INVENTION

Field of the Invention

This invention is directed to a timepiece structured to record and display elapsed time from an original input time of a specific event continuously through the current time period. Reliable and consistent monitoring of the elapsed time is facilitated by preventing a user or owner of the timepiece from arbitrarily resetting the timepiece to monitor a new or different event or from changing the original input time of one or more first selected specific events.

DESCRIPTION OF THE RELATED ART

The use of a timepiece to measure the elapsed time from a specific occurrence to a current time period or other related event are extremely well known and have been used in different forms for many years. Perhaps the most obvious or practical example of such timepieces is the conventional "stopwatch" frequently used in athletic events. As such, the stopwatch is activated at the beginning of the event and continued until the event ends or the event is interrupted one or more times. By way of example, an athlete's speed in a race is frequently determined by utilizing a stopwatch, activated at the start of the race and operated continuously until one or more participants cross the finish line.

1 The stopwatch will thereby record and display the time elapsed for
2 one or more participants to complete the race. Similarly, in team
3 sports field clocks, as well as other electronic timing devices are
4 utilized to display, both to the participants and spectators alike,
5 the allotted time remaining for playing the event. Therefore, the
6 elapsed time as recorded and displayed represents the continuously
7 diminishing time period left for continuance the sporting event.

8 Therefore, it is clear that a variety of different timepieces
9 are available to measure elapsed time of athletic and other events
10 of the type set forth above. Timepieces also exist which are
11 intended to display elapsed time or otherwise serve as
12 chronographic reminders of specific personal events which may have
13 occurred in the past. Such past events may be directly related to
14 achievements, honors, marriages, graduations, professional
15 achievements, births and on a more somber note, the passing of
16 loved ones. Utilization of elapsed time, chronological devices,
17 while popular in certain segments of today's modern society are not
18 used by many due to the belief that their operation is inherently
19 complex and/or unreliable. In addition, the average person may be
20 satisfied by a simple reference to a printed hard copy or
21 electronic displayed calendar. However, these latter devices are
22 unable to maintain a continuous record of the elapsed time and are
23 used to provide a reminder on a yearly, monthly, weekly or other
24 predetermined periodic basis.

25 Also, conventional electronic or mechanical timepieces of the

1 type set forth above are frequently structured to facilitate a
2 resetting of the timepiece in order that it may be used repeatedly
3 to measure the elapsed time of different events. Further, elapsed
4 time monitoring devices of the type mentioned above may be
5 specifically structured to maintain a current, accurate time for
6 display, while also having the capabilities of recording one or
7 more elapsed times for a variety of different events, at least on
8 a temporary basis. Therefore, the development and commercial
9 availability of a timepiece structured to record and display time
10 which has elapsed from an original date of occurrence to the
11 current time on a continuous and reliable basis would be accepted
12 by the public at large in that the disadvantages and problems
13 associated with past clocks, watches, etc. of this type would be
14 overcome.

15 Further, a user of such an improved timepiece could be assured
16 of the consistent, reliable and permanent nature of the operation
17 thereof, thereby making the timepiece more adaptable for recording
18 and displaying the elapsed time of more personal events such as the
19 beginning of a relationship, the date of a marriage, the birth of
20 one or more children and/or the passing of a loved one.
21 Accordingly, one operative feature which may be incorporated in an
22 improved timepiece of the type set forth herein would be
23 preventing of the user or owner from "arbitrarily" resetting the
24 timepiece to monitor the elapsed time of different events. In
25 other words, the user or operator would be prevented from changing

1 his or her mind, such as upon the ending of a personal
2 relationship.

3 Therefore, an improved timepiece of the type described would
4 be reliable and "permanent" to the extent that one or more specific
5 events selected for monitoring could not be easily changed, altered
6 or stopped. Further, an improved timepiece for measuring the
7 elapsed time of one or more specific events should also have the
8 capability of a limited access memory, wherein additional specific
9 events could be entered into the timepiece only by an original
10 manufacturer or other designated facility in order to further
11 assure the permanent nature of the elapsed time monitoring
12 activities of the timepiece.

13 14 SUMMARY OF THE INVENTION

15 The present invention is directed to a timepiece structured to
16 determine, record and display elapsed time from the first
17 occurrence of one or more specific events continuously up to and
18 including the current time. As such, events of a more personal
19 nature such as personal relationships, marriages, engagements,
20 child births, etc. would be permanently monitored in terms of the
21 elapsed time from the beginning of the event up through and
22 including the current time on a substantially perpetual basis. The
23 permanent nature of the operation of the timepiece in accomplishing
24 the monitoring of the elapsed time is further facilitated, as will
25 be explained in greater detail hereinafter, by preventing a user or

1 owner of the timepiece from "resetting" the chronographic operation
2 thereof in order to change the original input date of a specific
3 event or the specific event itself.

4 Most individuals have known or been directly associated with
5 numerous events wherein the reminder of the beginning of the event
6 brings back fond memories. Similarly, many individuals may have
7 encountered situations where a specific event such as personal
8 relationships, marriages, etc. was initially believed to be
9 terminated but which was continued for any of a variety of
10 different reasons. As such, the timepiece of the present invention
11 would assure the permanent nature of recording and monitoring the
12 elapsed time from the occurrence of a preselected event by
13 preventing the user or operator from arbitrarily "resetting" the
14 timepiece thereby destroying a record of the elapsed time on a
15 sometimes arbitrarily basis. As will further be explained herein
16 after, while such structural and operational features of the
17 timepiece restrict the ability to reset the timepiece, provisions
18 for resetting or "re-programing" the timepiece under certain
19 anticipated circumstances are made available. Further, stopping
20 operation of the timepiece would also be made purposely difficult
21 in order that the monitoring, recording and display of the elapsed
22 time of the specific event can be maintained on a "permanent"
23 basis.

24 Therefore, the timepiece of the present invention comprises a
25 housing having a display assembly structured to display the elapsed

1 time from at least the occurrence or beginning of one specific
2 event to and through the current time. The display assembly is
3 more specifically structured to automatically or selectively
4 present the elapsed time in at least one but preferably a plurality
5 of different time intervals of common denomination such as minutes,
6 hours, days, weeks, months, years, etc. The timepiece, in it's
7 various embodiments, also includes integrated, preferably digital
8 operative components.

9 More specifically, the timepiece of the present invention
10 comprises a digitally operative processor programed and/or
11 structured to include specific applications which are responsive
12 and collectively operative to accomplish the consistent, reliable
13 and continuous recording of the elapsed time. The specific event
14 can be initially entered into the processor by means of an original
15 input time. The processor includes a chronographic application
16 determinative of the elapsed time, once activated, from the
17 original input time, on a continuous basis through the current time
18 period. As such, an activation assembly is cooperatively
19 structured with the processor and more specifically with the
20 chronographic application to selectively instigate the monitoring
21 or recording of the elapsed time from the original input time.

22 Another structural and operative feature of the timepiece of
23 the present invention includes the processor comprising a
24 restrictive designation application structured to restrict a
25 "resetting" of the chronographic application. As such, the user

1 will not be able to "unilaterally" begin monitoring the elapsed
2 time of a different specific event without a predetermined
3 administrative processing of the operative components of the
4 timepiece, as will be more fully explained herein after.

5 Other structural features include the processor having a
6 memory capability initially provided to have a limited access.
7 Moreover, one or more original input times stored within the memory
8 capability would not be readily accessed without "defeating" the
9 limited access features associated with the memory. This also
10 assures a permanent nature of elapsed time recording capabilities
11 of the timepiece by only allowing a processing facility, such as
12 the original manufacturer or distributor, to access and re-
13 establish the original input time. By way of example only, if a
14 user or owner of the timepiece inadvertently or purposely stops the
15 operation thereof, resulting in the elapsed time no longer being
16 continuously monitored, the memory capability of the processor will
17 store the original input time of the preselected specific event.
18 Return of the timepiece, or at least the processor facility
19 associated therewith, to the original distributor or manufacturer
20 will allow access to the original input time of a given specific
21 event, stored in the memory. Upon re-entry of the original input
22 time, the chronographic application will again establish an
23 accurate and reliable elapsed time period as well as continue to
24 monitor the elapsed time as originally intended.

25 Also, while the timepiece of the present invention may be

1 electrically powered using a conventional power source and/or an
2 auxiliary, emergency power source, situations may arise where the
3 power source fails. In such an event, the memory capability is
4 further structured to retain the original input time as well as
5 facilitate operation of the processor to continue to monitor, on a
6 continuous basis, the amount of elapsed time therefrom during the
7 power failure. As a result, restoration of the power will result
8 in the timepiece displaying the accurate elapsed time since the
9 original input time, as if the power failure had not occurred.

10 Other operative and structural features adding to the
11 versatility of the timepiece of the present invention would be the
12 ability to add additional specific events, such as the birth of
13 additional children, for continuous and concurrent monitoring with
14 the original specific event, such as the marriage of a couple or
15 the birth of a first child. Therefore, the timepiece of the
16 present invention overcomes many of the disadvantages and problems
17 associated with elapsed time monitoring devices thereby making such
18 devices more desirable to a larger segment of the consuming public.

19 These and other objects, features and advantages of the present
20 invention will become more clear when the drawings as well as the
21 detailed description are taken into consideration.

22 23 BRIEF DESCRIPTION OF THE DRAWINGS

24 For a fuller understanding of the nature of the present
25 invention, reference should be had to the following detailed

1 description taken in connection with the accompanying drawings in
2 which:

3 Figure 1 is a front view in schematic form of a housing
4 including a display and control assembly associated therewith.

5 Figure 2 is a schematic representation in block diagram form
6 of a processor, its various applications and operative components
7 associated with the functioning of the timepiece of the present
8 invention.

9 Figure 3 is a schematic representation in block diagram form
10 representing structural and functional features of the timepiece of
11 the present invention.

12 Figure 4 is a schematic view in block diagram form further
13 representing the structural and operational features of the
14 timepiece of the present invention.

15 Figure 5 is a front view in schematic form of yet another
16 preferred embodiment of a housing including a variation of a
17 display and control assembly associated therewith, which differs
18 from the preferred embodiment of Figure 1 .

19 Like reference numerals refer to like parts throughout the
20 several views of the drawings.

21 22 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

23 As shown in the accompanying drawings, the present invention
24 is directed to a timepiece generally indicated as 10 structured to
25 determine and display elapsed time from the beginning of at least

1 one specific event up to and including the current time. As such,
2 the elapsed time from preferably one, but possibly a plurality of
3 various preselected events, may be continuously monitored and
4 visually reviewed. Further, the timepiece 10 of the present
5 invention represents a substantially "permanent" means for
6 monitoring and reviewing the elapsed time in that it is structured
7 to not be arbitrarily and/or easily turned off. In addition and as
8 will be explained in greater detail herein after, the structural
9 and operative features of the timepiece 10 restrict resetting
10 thereof by an owner or operator. Therefore, while the timepiece 10
11 does include a restrictive reset ability, such resetting or
12 "reprogramming" of the timepiece must occur in a deliberate fashion
13 preferably by the original manufacturer, distributor or other
14 "processing facility" equipt and authorized to preform the
15 resetting feature.

16 More specifically, the timepiece 10 includes a housing 12
17 having a display assembly generally indicated as 14 disposed on at
18 least one observable face or surface 16 thereof. In at least one
19 preferred embodiment, the display assembly 14 comprises a plurality
20 of display windows or observation areas 17 through 22 which
21 individually display one of a plurality of conventional time
22 intervals such as minute, hour, day, week, month, year, etc.
23 Accordingly, the plurality of windows 17 through 22 and their
24 respective time intervals collectively represent the complete
25 amount of time that has elapsed from the beginning or first

1 occurrence of a specific, selected event. It should be noted that
2 a number of windows or observation areas 17 through 22 may be fewer
3 or greater in number than that represented in Figure 1. With
4 reference to both Figures 1 and 5, different preferred embodiments
5 of the housing 12 and 12' can be structured to display different
6 time intervals such as only minutes and hours and/or days and
7 years. In each of the preferred embodiments of Figures 1 and 5,
8 the display assembly informs a user of the elapsed time
9 concurrently and continuously by displaying a number of different
10 time intervals as indicated.

11 More specifically, in the preferred embodiment of Figure 5 a
12 lesser number of display windows or areas 23 and 25 are included on
13 the face 16' of the housing 12'. By way of example only, these two
14 display windows may be initially intended to display a pair of
15 specific time segments, such as day and year. However, upon a
16 manipulation of the control assembly 24, to be described in greater
17 detail hereinafter, the time segments in each of the display
18 windows 23 and 25 may change to a different or alternate pair of
19 time segments, such as minutes and hours. Accordingly, while a
20 lesser number of display windows or areas 23 and 25 are present on
21 the face 16' when compared to the embodiment of Figure 1, a
22 significant number of time segments may be displayed on a
23 "selective" basis rather than automatically as demonstrated in
24 Figure 1. The selective changing of the time segment display is
25 manually controlled by manipulation of the control members 32, 34

1 or other specialized control members which may or may not be
2 considered a part of the control assembly 24.

3 In addition, the housing 12 includes a control assembly
4 generally indicated as 24. The control assembly may include a
5 plurality of buttons, knobs, or like control members which
6 independently serve to operate, actuate or otherwise facilitate the
7 function and control of the timepiece 10. As such, the control
8 assembly may include an on/off button or switch 26 and an
9 activating control button 28 operatively associated with an
10 activation assembly 30. One or more additional control buttons or
11 knobs 32 and 34 connected to other operative components are
12 included in the control assembly 24 for the further functioning or
13 control of the timepiece 10. By way of example only, one or more
14 of the additional control members 32 or 34 may be used to initially
15 set the timepiece 10 to the start or first occurrence time of a
16 specific event such as, but not limited to, the beginning of a
17 relationship, the date of birth, the time of marriage, etc.

18 As will be explained herein, the timepiece assembly of the
19 present invention is structured to be a permanent, continuous
20 monitoring of elapsed time from the beginning or first occurrence
21 of a specific event. Accordingly, a resetting of the timepiece to
22 vary the pre-chosen specific event or the original input time
23 marking the beginning of that event is significantly restricted.
24 However, one exception to this restriction would be allowing a user
25 predetermined time "adjustment time" from the initial setting of

1 the timepiece. The adjustment time may be used to reset the
2 timepiece so as to modify the original input time by way of
3 providing a more accurate time. By way of example only, a user may
4 initially select an original input time of October 10 at 12:00 noon
5 to be set into the timepiece as the beginning of a chosen event.
6 Within a short period of time the user may then determine that the
7 "correct" beginning or first occurrence of the chosen event was
8 actually some four hours later or on October 10 at 4:00p.m. The
9 timepiece 10 including the processor 40 and the control assembly 24
10 now will be cooperatively structured to allow adjustment of the
11 original input time by permitting it to be reset. However, the
12 adjustment or resetting must be accomplished within a predetermined
13 period of time of, by way of example only, 24 hours. Therefore,
14 within the 24 hour period immediately following the initial setting
15 of the original input time into the timepiece assembly 10, the user
16 will be allowed to reset or adjust the original input time to more
17 accurately represent the beginning or first occurrence of the
18 chosen event. Such resetting can also occur by manipulation of the
19 control members 32 or 34 as set forth above.

20 It should be further noted that the timepiece 10 and its
21 various operative components may or may not be structured to serve
22 as a conventional timepiece displaying to a user or operator the
23 current time, such as in hours and minutes, by means of a digital
24 display in the windows or observation areas 21 and 22 OR 23 and 25.
25 This conventional functioning may or may not be available once the

1 user of the timepiece 10 decided to select a specific event from
2 which the elapsed time is to be recorded and displayed. Therefore,
3 the on/off switch as at 26 could first be manipulated to initially
4 activate the timepiece 10, wherein the other control or setting
5 knobs 32 and/or 34 may be manipulated to initially set the
6 timepiece 10 to the current time in terms of hours or minutes.
7 Subsequently, when a specific event had been selected, the
8 activation assembly could be operated, through manipulation of the
9 control knob 28, as well as the one or more setting knobs 32 and 34
10 so as to enter the beginning or first occurrence of the selected
11 specific event. Once the specific event was entered, the timepiece
12 10 could be structured to no longer function as a conventional
13 timepiece for displaying the current time period, as desired by the
14 user.

15 With specific reference to Figures 2 through 4, the timepiece
16 10 of the present invention would incorporate a processor generally
17 indicated as 40. The processor and other operative components of
18 the timepiece 10 may be powered by either a self contained or
19 external source of energy, schematically represented as 41.
20 Moreover, the processor 40 is preprogrammed and otherwise
21 structured to include a variety of applications which facilitate
22 the functioning of the timepiece 10 in the intended manner. More
23 specifically, the processor preferably includes a chronographic
24 application 42 structured to record and monitor the elapsed time of
25 the specific event from the entered beginning or first occurrence

1 of the specific event. For purposes of clarity, the beginning or
2 first occurrence of a selected specific event will hereinafter be
3 represented as the "original input time". As such the
4 chronographic application 42 would record and facilitate the
5 display, by means of the display assembly 14 or 14', of the amount
6 of time that has elapsed from the original input date of a specific
7 event to and through the current time period. The above mentioned
8 activation assembly 30 is operatively interconnected to the
9 chronographic application 42 so as to facilitate the entry of the
10 original input time of the selected specific event. In addition,
11 the activation assembly and the chronographic application may be
12 cooperatively structured and operatively interconnected to
13 instigate the continuous monitoring by the chronographic
14 application of the elapsed time from the specific event and more
15 specifically from the original input time, to and through the
16 current time.

17 In addition to the above and as will be explained in greater
18 detail herein after, the processor 40 further includes memory
19 capability as at 44 which stores the original input time entered as
20 the beginning or first occurrence of the selected specific event.
21 Moreover, the original input time stored by the memory facilitates
22 a restoration of the original input time to the chronographic
23 application 42 if and when it is found necessary to "reprogram" or
24 reset the chronographic application or in the event of a power
25 failure. Such reprogramming or "resetting" of the timepiece 10 is

1 prohibited except under restricted circumstances in order to assure
2 the permanency of the functioning of the timepiece 10. A user or
3 owner of the timepiece 10 may thereby consistently depend on the
4 reliability of maintaining an accurate record of the elapsed time
5 from the original input date to the current time of any selected
6 specific event.

7 However, if the user or owner wants to reset the timepiece 10
8 upon the happening of a special occurrence, such as giving birth to
9 twins, the beginning of a new relationship, etc. resetting of the
10 timepiece 10 is possible but preferably not by the owner or
11 operator on an arbitrary basis. Accordingly, the processor 40
12 further comprises a restrictive designation application 46
13 operative with and specifically structured to restrict resetting of
14 the chronographic application to any "other" original input time
15 once the chronographic application 42 has been initially activated
16 and the elapsed time of the first selected specific event is being
17 monitored. In more simplistic terms, the owner or operator will
18 be prevented from changing his or her mind at least to the extent
19 of selecting a new specific event or changing the original input
20 time thereof. As set forth above, a preferred exception to this is
21 the ability to "modify" or adjust the original input time within a
22 predetermined time period in order to provide a "more accurate"
23 original input time. Again, this assures the permanency and
24 reliability of the timepiece 10 in accurately displaying the
25 quantity of elapsed time from the initial input time of the first

1 selected specific event. The restrictive designation application
2 46 is thereby specifically structured to at least initially limit
3 selection of the specific event to a single happening or
4 occurrence.

5 Additional preferred embodiments of the timepiece 10 may
6 include structural and operational features which allow more than
7 one specific event to be initially entered into one or more
8 chronographic applications 42. By way of example, the timepiece 10
9 may be initially structured to allow two or more specific events to
10 be secured or programmed into the processor 40, whereby the elapsed
11 time from the original input time of each of the selected specific
12 events will be recorded and/or selectively displayed by means of a
13 display assembly 14 or more than one display assembly 14,
14 associated with the housing 12.

15 Further restrictive measures incorporated within the processor
16 40 intended to prevent the resetting of the timepiece 10 by a user
17 or owner includes a limited access application 48. The limited
18 access application 48 is structured to restrict access to the
19 memory capability 44 and any data or original input time stored
20 therein. Moreover, even though one or more original input times,
21 dependent upon the preferred embodiment of the present invention
22 utilized, may be stored in the memory capability 44, access thereto
23 for purposes of resetting or re-establishing continued operation of
24 the chronographic application 42 is restricted. However, in
25 certain specific situations, as generally referred to above, the

1 owner or user may be desirous of entering a new original input time
2 for different or additional specific event, such as by the birth of
3 a second child, the birth of twins, etc. as set forth above. To
4 accomplish this procedure the timepiece 10 and/or the processor 40,
5 preferably in the form of a microprocessor chip or like electronic
6 structure, is returned to an original manufacturer, distributor or
7 other processing facility to accomplish the deliberate resetting of
8 the timepiece 10. The authorized processing facility (not
9 represented in the Figures for purposes of clarity) will thereby be
10 allowed to enter the memory capability 44 by "defeating" the
11 limited access application 48. Such defeat of the limited access
12 application 48 may be accomplished by a built in access code or a
13 variety of other operational techniques and procedures well known
14 in the processor art.

15 The operational and structural features of the timepiece 10 of
16 the present invention is represented in Figure 3, wherein an owner
17 or operator first determines a specific event for which the elapsed
18 time is to be monitored, as at 50. In cooperation with the
19 activation assembly 30, the original input time is entered as at 52
20 into the chronographic application 42, wherein the original input
21 time is also stored in the memory capability 44, as discussed
22 above. Activation of the timepiece 10 as at 30 serves to instigate
23 monitoring of the elapsed time by the chronographic application 42
24 as at 54. The elapsed time, as monitored and recorded by the
25 chronographic application 42 is then continuously displayed by the

1 display assembly 14 or 14' utilizing the one or more of the display
2 or observation windows 17 through 22 of the preferred embodiment of
3 Figure 1 or the display windows 23 and 25 of the preferred
4 embodiment of Figure 5.

5 As emphasized above, the permanent nature and reliability of
6 the timepiece 10 in monitoring, recording and displaying the
7 elapsed time from the original input time of one or more specific
8 events is assured by preventing the owner or operator from
9 "arbitrarily" resetting the timepiece 10 or easily stopping it from
10 functioning. However, when a resetting or reprogramming of the
11 chronographic display 42 is desired purposes of changing first
12 chosen "original event", the timepiece 10 and/or the processor 40
13 may be delivered to a manufacturer, distributor or other control
14 processing facility for resetting or reprogramming. Accordingly,
15 as represented in Figure 4, a specific event for which the
16 chronographic display 42 is to be reprogrammed is determined as at
17 50'. The restrictive designation application 46 is "bypassed" by
18 the facilities and procedures available at the processing facility.
19 Similarly, the limited access application 48 is defeated by the
20 aforementioned access code or other technique which allows access
21 to the memory capability 44. Once the memory capability 44 is
22 accessed, the original input times can be retrieved as at 56 and
23 restored to the chronographic applications 42 or the processor can
24 be restored or replaced so that a "new" specific event can be
25 monitored. The chronographic application 42 can then be

1 reactivated to initiate continuous monitoring, such as by operation
2 of the activation assembly 30, wherein the monitored and/or
3 recorded elapsed time will be displayed as at 14 or 14' on housing
4 12 or 12', respectively.

5 One exception to the requirement of returning the processor 40
6 and/or timepiece 10 to a central processing facility would be when
7 the timepiece 10 or 10' encounters a power failure. While the
8 energy source 41 is intended to be representative of a conventional
9 power source as well as an auxiliary or "emergency" power source,
10 power failure may still occur. Upon such an occurrence, the memory
11 capability 44 of the processor 40 is structured to retain the
12 original input time and be operational with the chronographic
13 application 42 such that no time is lost during the period of the
14 power failure. When the power is restored, the processor 40 will
15 be fully operative to continuously display an accurate elapsed time
16 from the original input time preset or programed into the processor
17 40, as described above.

18 Since many modifications, variations and changes in detail can
19 be made to the described preferred embodiment of the invention, it
20 is intended that all matters in the foregoing description and shown
21 in the accompanying drawings be interpreted as illustrative and not
22 in a limiting sense. Thus, the scope of the invention should be
23 determined by the appended claims and their legal equivalents.

24 Now that the invention has been described,
25